

## Notice of Proposed Rule Making of JCAR Part 141

**NPRM: Reg. 2/2023**

**Release Date: 07/09/2023**

Jordan Civil Aviation Regulatory Commission (CARC) hereby releases a proposed issue of JCAR Part 141.

The objective of this NPRM is to announce the proposed issue and to seek concerned parties' comments and feedback regarding the above mentioned regulations and to facilitate enhanced public involvement in the rule making process.

CARC encourages comments concerning this proposal to be directed to the following email addresses:

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Director Civil Aviation Regulations

***The closing date of comments: 06/11/2023***



**Capt. Haitham Misto  
Chief Commissioner/CEO  
Civil Aviation Regulatory Commission**



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## **Part 141**

### **Land Use Planning Around Civil Airports**

This part of Jordanian Civil Aviation Regulations is hereby issued under the authority and provisions of article 12-B of the Civil Aviation Law No. (41) dated 2007, as amended.

**Capt. Haitham Misto**  
**Chief Commissioner/CEO**  
**Civil Aviation Regulatory Commission**

**Record of Revisions**

<b>Amendment No.</b>	<b>Effective date</b>	<b>Subpart</b>	<b>Paragraph</b>
Original	, 2023	All	All

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## Subpart - A General

### 141.1 Purpose

- (a) Establishing standards for determining the Land Use Planning Around Civil Airports.
- (b) Subject to Paragraph (c), prescribes rules for persons using the lands surrounding civilian airports, and proposes:
  - (1) To construct or alter a structure that could constitute a hazard to air traffic at airports or
  - (2) The use of a structure or storage of dangerous goods, lights, lasers, weapons, or pyrotechnics may pose a hazard in airports.
- (c) Sets forth the requirements for notice to CARC of certain proposed constructions or alteration
- (e) Provides standards for the establishment of wind antennas farm areas, solar farms, storage or use of petrochemical materials, waste treatment plant and landfills.
- (d) Provide for aeronautical studies of obstructions to air navigation to determine their impact on the safe and efficient use of airports.

### 141.2 Definitions

**Airport:** A defined area on land or other hard surface excluding water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

**Airport available for public use:** An airport that is open to the public with or without a prior request to use the airport.

**Airport reference point:** The designated geographical location of an airport.

**Applicant:** Owner or owner's representative through the concerned authority, or any official authority.

**Dangerous Goods:** Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

**Ground level at its site:** The highest ground within a 600 m (2000 ft) radius of the site, for the purpose of establishing the maximum height for objects.

**Laser-beam critical flight zone (LCFZ):** Airspace in the proximity of an airport but beyond the LFFZ where the irradiance is restricted to a level unlikely to cause glare effects.

**Laser-beam free flight zone (LFFZ):** Airspace in the immediate proximity to the airport where the irradiance is restricted to a level unlikely to cause any visual disruption.

**Laser-beam sensitive flight zone (LSFZ):** Airspace outside, and not necessarily contiguous with, the LFFZ and LCFZ where the irradiance is restricted to a level unlikely to cause flash-blindness or after-image effects.

**Normal Flight Zone (NFZ):** Airspace not defined as LFFZ, LCFZ or LSFZ but which must be protected from laser radiation capable of causing biological damage to the eye.

**Notice of construction or alteration:** The notification presented to CARC by any applicant about any construction or alteration of any structure prior to the release of any construction or alteration license.

**Obstacle:** All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above an obstacle limitation surface intended to protect aircraft in flight, the height of the objects under consideration include any extensions to the existing ones.

**Obstacle limitation surfaces:** Imaginary surfaces established within the boundary or in the vicinity of airports for the purpose of defining the volume of airspace that should ideally be kept free from obstacles to ensure safe operation of aircrafts, in compliance with the requirements established in CARC Publication AN 14-I.

**Obstruction Management Committee:** A committee formed by CARC entrusted to ensure implementation of the requirements of this Part.

**protected flight zones:** Airspace specifically designated to mitigate the hazardous effects of laser radiation.

**Runway:** A defined rectangular area on a land airport prepared for the landing and take-off of aircraft.

**Threshold:** The beginning of that portion of the runway usable for landing.

**Visual Flight Guide:** A guide, forming part of the AIP, that provides essential airport information for pilots performing VFR operations.

**Visual runway:** A runway intended for the operation of aircraft using non-instrument visual approach procedures.

### 141.3 Standards

The standards, as prescribed in 141.203, established in this part for determining obstructions to air navigation, are used by CARC in:

- (1) Developing technical standards and guidance in for determining obstructions to air navigation
- (2) Imposing requirements for public notice of the construction or alteration of any structure where notice will promote air safety.

## **Subpart - B**

### **Notice Requirements**

#### **141.101 Applicability**

- (a) This subpart requires each applicant proposing any kind of construction or alteration described in 141.105 to obtain approval of CARC by submitting a form of a notice, as specified in 141.103.
- (b) If requested by CARC, the applicant must also file supplemental notice before the start date and upon completion of certain construction or alterations that are described in 141.105.
- (c) Notice received by CARC under this subpart is used to:
  - (1) Evaluate the effect of the proposed construction or alteration on the operational procedures and maintaining the safety of air traffic at the airport.
  - (2) Determine whether the effect of proposed construction or alteration is a hazard to air traffic at the airport.
  - (3) Determine the requirements for marking and lighting of constructions or alterations, in accordance with CARC regulation AN 14-I.
  - (4) Determine other appropriate measures to be applied for continued safety of air traffic at the airport; and
  - (5) Charting and other notification to airmen (NOTAM) of the construction or alteration.

#### **141.103 Form and time of notice**

- (a) Each applicant required to file notice under 141.105, shall submit to CARC a completed Form 34/OBS1,
- (b) The applicant shall submit this form at least 30 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.
- (c) If the proposed construction or alteration is also subject to the licensing requirements of the Telecommunications Regulatory Commission (TRC), Energy and Minerals Regulatory Commission (EMRC) or any other concerned authority may be sent to CARC at the same time the application for construction is filed with the TRC, or any other concerned authority, or at any time before that filing.

#### **141.105 Construction or alteration requiring notice**

- (a) Each applicant who proposes the construction or alteration of a structure at a land use around civil airports, shall notify CARC in the form and manner prescribed in 141.103:
  - (1) Any construction or alteration is:
    - (i) At its site within a 5000 meters radius of an airport.
    - (ii) Used for storage of petrochemical materials or any kind of dangerous goods within a radius of 5000 m from the airport.
    - (iii) Wind turbines within a radius of 15 km from the airport; and
    - (iv) Solar farms more than 1 MW within 15 km from the airport

- (v) Inside the approach area which are 15 km long from each direction of the runway.
- (vi) Within height of 40m or more above the natural ground level, any place inside the kingdom of Jordan.
- (2) Any construction or alteration penetrating the obstacle limitation surface in accordance with the criteria specified in CARC Publication AN 14-I.
- (3) Waste treatment plant and landfills projects within 8000 m from the airport.
- (b) Any highway, railroad, high voltage power line, or other traverse way for mobile objects, of a height which, if adjusted upward 5 meters for any highway where over crossings are designed for a minimum of 5 meters vertical distance, 4 meters for any other public roadway, 3 meters or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 7 meters for a railroad, and for any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) (1) or (2) of this section.
- (c) Any construction or alteration on any of the following airports:
  - (1) An airport that is available for public use.
  - (2) An airport under construction that is the subject of a notice or proposal on file with CARC.
- (d) Each applicant who undertakes construction or alteration that is the subject of a notice under paragraph (a) of this section shall, within 7 days after that construction or alteration reaches its greatest height, notify CARC.
- (e) CARC reserves the right to request any of the law enforcement governmental entity to act against any applicant who failed to notify CARC of the proposed construction or alteration to remove the structure.
- (f) A notice filed with CARC does not relieve the applicant of compliance with any other applicable regulations.



## **Subpart - C**

### **Standards for Determining Obstructions and limitations around Civilian Airports**

#### **141.201 Applicability**

This subpart establishes standards for release decisions for use of lands surrounding the airport, it applies to:

- (a) Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus.
- (b) The alteration of any permanent or temporary existing structure by a change in its height, including appurtenances, or lateral dimensions, including equipment or material used therein.

#### **141.203 Standards for Determining Obstructions**

- (a) An existing object including a mobile object is, and a future object would be, based on the circumstances of each proposal, an obstruction to air navigation if:
  - (1) Its height penetrates or protrudes the surface of a take-off and landing area of an airport or any obstacle limitation surface of an airport established in accordance with CARC Publication AN 14-I.
  - (2) Its height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.
  - (3) Its height within an en route obstacle clearance area, including turn and termination areas, of airways or approved off-airway route, that would decrease the minimum obstacle clearance altitude.
  - (4) It is located within an instrument flight procedures area that is specified in ICAO document 8168-OPS/611, including standard arrival routes, initial, intermediate, final, visual, and missed approach segment areas, departure areas and standard instrument departure routes, and would result in:
    - (i) The vertical distance between any point on the structure and an established minimum instrument flight altitude within that area or segment being less than an obstacle clearance height required; or
    - (ii) Additional or new ceiling or visibility restrictions or a change in flight procedures applicable to departures within that area.
- (b) Except for traverse ways on or near an airport with an operative ground traffic control service, furnished by an air traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by:
  - (1) Five meters for a highway where overcrossings are designed for a minimum of five meters vertical distance.

- (2) Four meters for any other public roadway.
  - (3) Three meters or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.
  - (4) Seven meters for a railroad, and
  - (5) For any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.
- (c) The use of lights is an obstruction to air navigation if an analysis discloses that their use will constitute a hazard in navigable airspace.
  - (d) The use of lasers within 18.5 km from the airport reference point is an obstruction to air navigation if their use will produce exposures in navigable airspace exceeding the maximum permissible exposure defined for that zone.
  - (e) The use of weapons within 15 km from the airport is an obstruction to air navigation if an analysis discloses that their use will constitute a hazard in navigable airspace.
  - (f) The use of pyrotechnics within 15 km from the airport is an obstruction to air navigation if an analysis discloses that their use will constitute a hazard in navigable airspace.

#### **141.205 Civil Airport Imaginary Surfaces**

The civil airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach procedure existing or planned for that runway end.

Specifications on Obstacle limitation surfaces are given in CARC publication AN 14-1, Chapter (4).

#### **141.207 Standards for Determining Solar Farms**

- (a) CARC may accept small projects of photovoltaic technology inside airports, only to serve the airport operator to reduce the airport operating cost, provided that these projects are subject to evaluation by Civil Aviation Regulatory Commission before and after the installation and operation process.
- (b) CARC may accept solar farms projects for commercial purposes using photovoltaic technology outside the perimeter of airports at a distance more than 15 km from the boundary of the airports in both the latitudinal and longitudinal directions, if it is outside the approach area.
- (c) CARC may accept commercial solar farm projects within a 15-kilometer radius from the airport borders, under the following conditions:
  - (1) A safe distance of a minimum of 5 km is maintained on both transverse sides from the ends of aircraft approach areas.
  - (2) A comprehensive risk assessment is conducted and obtains approval from CARC prior to the commencement of solar panel installation.
  - (3) The investor agrees to accommodate necessary amendments during the installation period, if required.

- (d) In cases deemed necessary by CARC, solar farm projects may require approval from other stakeholders.

#### **141.209 Standards for Determining Storage of Dangerous Goods and/or Petrochemical Facilities**

- (a) Storage of dangerous goods or construction of petrochemical facilities, including but not limited to, (gas stations, gas warehouses, paint factories, etc.), within a radius of (5) km around any airport, requires notification and approval from CARC subsequent to an aeronautical study.
- (b) Storage of dangerous goods or construction of petrochemical facilities, including but not limited to, (gas stations, gas warehouses, paint factories, etc.) within the aircraft approach area, encompassing a 15 km radius, is strictly prohibited.
- (c) Storage of dangerous goods or construction of petrochemical facilities, including but not limited to, (gas stations, gas warehouses, paint factories, etc.), within one kilometer on either side of the runway is prohibited.
- (d) Storage of dangerous goods or construction of petrochemical facilities, including but not limited to, (gas stations, gas warehouses, paint factories, etc.), is prohibited at the entrance of an airport, spanning from the main road to the airport terminal.

#### **141.211 Standards for Determining Wind Turbines**

- (a) The notice requirements specified in this section shall apply to wind turbines.
- (b) Wind turbines shall adhere to marking and lighting requirements as outlined in CARC Publication AN 14-I (Chapter 6).
- (c) Placement of wind turbines within a 15 km radius of the aircraft approach area is strictly prohibited.

#### **141.212 Standards for Determining Waste Treatment Plant and Landfills**

- (a) Establishment of local landfills within an 8 km radius of a civil airport is prohibited due to the potential attraction of wild animals and birds caused by solid waste landfills.
- (b) Construction or establishment of wastewater treatment plants within an 8 km radius of a civil airport is prohibited.
- (c) Treatment of waste generated at airports shall adhere to CARC regulations outlined in JCAR Part 301.

#### **141.215 Standards for objects to be marked or lighted**

Whenever the Civil Aviation Regulatory Commission (CARC) determines it necessary for the safety of air navigation, objects shall be appropriately lighted and/or marked. Alternatively, obstacles shall adhere to the lighting and marking standards as prescribed in the CARC publication AN14-1 Airport Design and Operation.

## **Subpart D**

### **Aeronautical Studies and Determinations**

#### **141.301 Applicability**

- (a) This subpart applies to any aeronautical study of a proposed construction or alteration for which notice to CARC is required under 141.105.
- (b) The purpose of an aeronautical study is to determine whether the aeronautical effects of the specific proposal and, where appropriate, the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures, would constitute a hazard to air navigation.
- (c) The obstruction standards in subpart C of this part are supplemented by other regulations and Guidance materials used in determining the effect on the navigable airspace of a proposed construction or alteration. When CARC needs additional information, it may circulate a study to interested parties for comment.

#### **141.303 Initiation of Studies**

- (a) CARC will request an aeronautical study when it is determined that it is necessary.
- (b) Specifications on aeronautical safety studies obstacle are given in the CARC Publication AN 14-1, Chapter (4) and CARC related guidance materials.

#### **141.305 Evaluating Aeronautical Effect**

CARC requests an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by CARC, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies include evaluating:

- (1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules.
- (2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules.
- (3) The impact on existing and planned public use airports.
- (4) Airport traffic capacity of existing public use airports and public use airport development plans received before the issuance of the final determination.
- (5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures.
- (6) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems.
- (7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.